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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,920	11/06/2003	Yao-Der Huang	11619-US-PA	2919
43831 7590 09/07/2007 BERKELEY LAW & TECHNOLOGY GROUP, LLP 17933 NW Evergreen Parkway, Suite 250 BEAVERTON, OR 97006			EXAMINER RUDE, TIMOTHY L	
			ART UNIT 2871	PAPER NUMBER
			MAIL DATE 09/07/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/605,920

Applicant(s)

HUANG ET AL.

Examiner

Timothy L. Rude

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 21-28 is/are pending in the application.
- 4a) Of the above claim(s) 25-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 21-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claims and Claim Objections

Claims 1 and 4 are amended. Claims 21-28 are added. Please note claim 23 improperly depends from canceled claim 7. For examination purposes, claim 23 will be considered to depend from claim 4. Appropriate correction is required.

Election/Restrictions

Newly submitted claims 25-28 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Originally presented claims were drawn to a light guide with a plurality of transparent element structures in a plurality of notches.

Newly added independent claim 25 (and therefore dependent claims 26-28) are drawn to a means for reflecting light back into the light guide plate. Please note that this limitation is met by literally any surface external to the back side of the light guide; this limitation does not require anything in the plurality of notches at all. Examiner considers these new claims to be very broad and fundamentally drawn to an alternate species of external reflector as opposed to the previously examined plurality of transparent element structures in a plurality of notches. Furthermore, there may be 112, second paragraph, issues based upon disparity with Applicant's original disclosure.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits.

Accordingly, claims 25-28 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 2871

1. Claims 1-6 and 21, 22, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasagawa et al (Sesagawa) USPAT 6,454,452 in view of Pelka et al (Pelka) USPAT 6,647,199 B1.

As to claims 1, 2, 4, and 5, Sasagawa discloses a light guide plate structure [back light device, entire patent, e.g., Figures 1-2B] comprising:

a light guide plate, comprising at least one light incident surface, a light scattering surface, 24, and a light emitting surface, top, wherein the light incident surface, 20, is on a sidewall of the light guide plate, the light scattering surface is on a bottom surface of the light guide plate, the light emitting surface is on a top surface of the light guide plate, wherein the light scattering surface has a plurality of notches; and a plurality of transparent element structures [air, scope of "element structures" is equivalent to "elements" per Applicant's response of 30 October 2006], disposed within the plurality of notches, wherein a reflective index of the plurality of transparent element structures is different from that of the light guide plate. Please note that the term structure can reasonably be considered to mean configuration, form, shape, etc. Furthermore, air is a substance that has an index of refraction. The structures would perform differently if the assembly were immersed in an alternate gas or gas mix having a different index of refraction or color. The mere fact that these structures are made of air structured by the boundaries of the notches does not diminish their significance.

A schematic diagram of a photomask 100. It shows a substrate 15 with a grid of rectangular openings 4. A layer 20 is deposited on the substrate, filling the openings. An arrow labeled "LIGHT" points towards the mask from the left. Dimensions 5 and 15 are indicated.

Sasagawa does not explicitly disclose a display wherein the plurality of transparent element structures comprises a glass or an acrylic material.

Pelka teaches that use of acrylic is known to be a preferred material for use in the making of light guide plates [col. 6, lines 26-36] and Pelka teaches that transparent scattering element structures can be made of any transparent material that has an index of refraction different from that of the light guide [col. 9, lines 28-32]. Pelka also teaches that such structures can be concave, convex, smooth, or rough to increase optical diffusion [col. 15, lines 62-67]. Please note that this would result in Applicant's newly added limitations of having first and second surfaces so that the first surfaces are within the plurality of notches and the second surfaces are outside the plurality of notches [convex or protruding].

Pelka is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add a plurality of transparent element structures comprising a glass and/or an acrylic material having first and second surfaces so that the first surfaces are within the plurality of notches and the second surfaces are outside the plurality of notches as art recognized equivalents for the same purpose of forming transparent scattering element structures with satisfactory performance in a back light device [MPEP 2144.06].

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Sasagawa with the plurality of transparent element structures comprising a glass and/or an acrylic material having first and second surfaces so that the first surfaces are within the plurality of notches and the second surfaces are outside the plurality of notches of Pelka as an art recognized

equivalents for the same purpose of forming transparent scattering element structures with satisfactory performance in a back light device.

As to claim 3, Sasagawa in view of Pelka, as combined above, teach the light guide plate structure of claim 1, wherein the light guide plate is a mesa light guide plate, the plurality of transparent elements have different sizes, the plurality of transparent element structures are disposed on the light scattering surface at least partially in sequence by the size, and bottom surfaces of the plurality of transparent element structures are substantially coplanar [Fig. 2B].

As to claim 6, Sasagawa in view of Pelka, as combined above, teach the back light of claim 4, wherein the light guide plate is a mesa light guide plate, the plurality of transparent element structures have different sizes, the plurality of transparent element structures are disposed on the light scattering surface at least partially in sequence by the size, and bottom surfaces of the plurality of transparent element structures are substantially coplanar [Fig. 2B].

As to claim 21, Sasagawa in view of Pelka, as combined above, teach the light guide plate structure of claim 1, wherein the first surfaces are adapted to reflect light incident from the light incident surface, and the second surfaces are adapted to reflect light that has transmitted through the first surfaces [Pelka, col. 6, lines 26-36, col. 9, lines 28-32, and col. 15, lines 62-67].

As to claim 22, Sasagawa in view of Pelka, as combined above, teach the light guide plate structure of claim 1, wherein the first surfaces are above the light scattering surface and the second surfaces are below the light scattering surface [Pelka, convex protruding structures, col. 6, lines 26-36, col. 9, lines 28-32, and col. 15, lines 62-67].

As to claim 24, Sasagawa in view of Pelka, as combined above, teach the back light of claim 4, wherein the at least one surface that is outside of the plurality of notches and outside of the light guide plate structure is reflective [Pelka, convex protruding structures, col. 6, lines 26-36, col. 9, lines 28-32, and col. 15, lines 62-67].

2. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sasagawa in view of Pelka and further in view of Bourdelais et al (Bourdelais) USPAT 6,846,098 B2.

As to claim 23, Sasagawa in view of Pelka, as combined above, teach the light guide plate structure of claim 4 (Applicant's claim 7, canceled) with an upper light emitting surface to receive light from the first and second surfaces.

Sasagawa in view of Pelka do not explicitly disclose a device further comprising a diffusion sheet and a brightness enhancement film disposed on the light emitting surface.

Bourdelaïs teaches [Figure 2] the use of a diffusion sheet, 12, and a brightness enhancement film, 14, disposed on the light emitting surface to improve backlight diffusion performance [col. 4, lines 1-30].

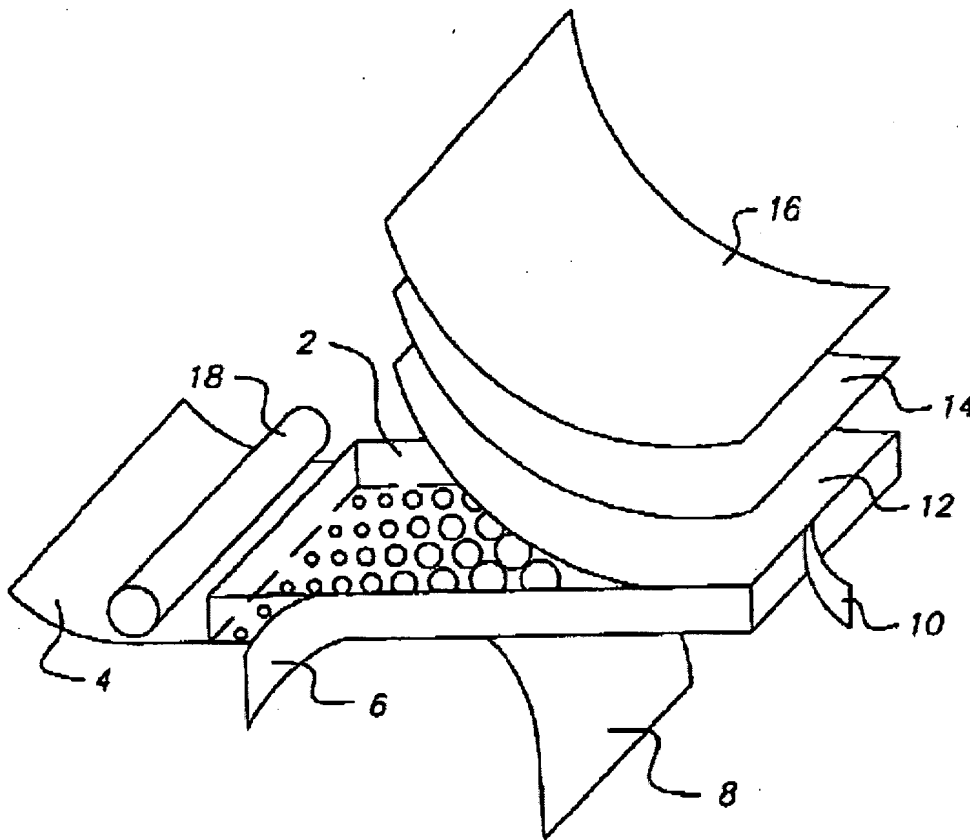


FIG. 2

Bourdelaïs is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add the use of a diffusion sheet, 12, and a

brightness enhancement film, 14; disposed on the light emitting surface to improve backlight diffusion performance [col. 4, lines 1-30].

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Sasagawa in view of Pelka with the use of a diffusion sheet, 12, and a brightness enhancement film, 14, disposed on the light emitting surface of Bourdelais to improve backlight diffusion performance [col. 4, lines 1-30].

Response to Arguments

Applicant's arguments filed on 08 June 2007 have been fully considered but they are not persuasive.

Applicant's ONLY substantive arguments are as follows:

(1) Regarding base claims 1 and 4, Sasagawa does not disclose transparent element structures having first and second surfaces so that the first surfaces are within the plurality of notches and the second surfaces are outside the plurality of notches

(2) Dependent claims are allowable because they directly or indirectly depend from an allowable base claim.

Examiner's responses to Applicant's ONLY arguments are as follows:

- (1) It is respectfully pointed out that Pelka is applied to teach such elements.
- (2) It is respectfully pointed out that in so far as Applicant has not argued rejection(s) of the limitations of dependent claim(s), Applicant has acquiesced said rejection(s).

Any references cited but not applied are relevant to the instant Application.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L. Rude whose telephone number is (571) 272-2301. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Timothy L Rude
Examiner
Art Unit 2871

tlr

TL Rude
8/31/07